

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-044

ISSUING WASTE DISCHARGE REQUIREMENTS FOR:

U.S. ARMY CORPS OF ENGINEERS, SAN FRANCISCO DISTRICT
FISCAL YEARS 1990-1992
ANNUAL MAINTENANCE DREDGING

The California Regional Water Quality Control Board, San Francisco Bay Region (the Board), finds that:

1. The U.S. Army Corps of Engineers, San Francisco District (hereinafter the discharger) maintains the navigability of Federally authorized channels in the San Francisco Bay.
2. The discharger's dredging proposal consists of the San Pablo Bay-Mare Island Strait, the Richmond Harbor, the Oakland Harbor, Suisun Bay Channel, Petaluma(Across-the-Flats), San Pablo Bay-Pinole, San Rafael Creek (River Channel) and Suisun Channel (Slough) projects remove accumulated sediment (primarily silt and clay) by hydraulic (e.g. self-propelled hopper; hydraulic cutter head) or mechanical (e.g. clamshell) dredge and disposes of the material by either self-propelled hopper or dump scow at a designated aquatic disposal site.
3. The San Pablo Bay - Mare Island Strait project removes approximately 1,000,000 cubic yards annually and disposes of the material at the EPA/COE designated site in Carquinez Strait (SF-9).
4. The Richmond Harbor project removes approximately 900,000 cubic yards annually and disposes of the material at the EPA/COE designated site west of Alcatraz Island (SF-11).

5. The Oakland Harbor project removes approximately 500,000 cubic yards annually and disposes of material at the EPA/COE designated site west of Alcatraz Island (SF-11).
6. The Suisun Bay Channel project removes approximately 200,000 cubic yards annually and disposes of material at the Suisun Bay disposal site (not numbered).
7. The Petulama (Across-the-Flats) project removes approximately 600,000 cubic yards every three years and disposes of the material at the EPA/COE designated site in San Pablo Bay (SF-10).
8. The San Pablo Bay-Pinole project removes approximately 500,000 cubic yards every two years and disposes of the material at the EPA/COE designated site in San Pablo Bay (SF-10).
9. The San Rafael Creek (River Channel) project removes approximately 60,000 cubic yards every three years and disposes of the material at the EPA/COE designated site west of Alcatraz Island (SF-11).
10. The Suisun Channel (Slough) project removes approximately 90,000 cubic yards every ten years and disposes of the material in the EPA/COE designated site in Carquinez Strait (SF-9).
11. The Redwood City Harbor project removes approximately 800,000 cubic yards every five years and disposes of the material in the EPA/COE designated site west of Alcatraz Island (SF-11).
12. The discharger as a lead agency has determined that the proposed project and its impacts are similar to those considered in the Final Composite Environmental Statement on Maintenance Dredging, Existing Navigation Projects, San Francisco Bay Region, California, December 1975. Therefore, no further environmental documentation is required to comply with NEPA for the 1990-1992 maintenance dredging. In addition, the proposed maintenance dredging is exempt from CEQA pursuant to Section 15304(g) of the Resource agency Guidelines because the material is to be deposited at a site formally approved by EPA and COE.
13. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (the Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for San Francisco Bay. The Board adopted an amendment to the Basin Plan on the Regulation of Dredged Sediment Disposal in the San Francisco Bay on July 19, 1989. The State Board approved the Basin Plan amendment on January 18, 1990.

14. The Regional Board recognizes that the continued disposal of maintenance work will require a demonstration that there are no significant or irreversible impacts occurring from the disposal of maintenance dredged material in San Francisco Bay. The Regional Board recognizes the COE expertise in this area and encourages the COE to coordinate the Demonstration Program. The Regional Board will participate in the development and review of the Demonstration Program prior to adopting further restrictions on dredged material disposal.
15. The disposal of dredged sediment in San Francisco Bay is suspected of having an adverse impact on the Estuary's beneficial uses. Little information is available to assess the cumulative and long-term effects of this activity. Therefore, studies are warranted to better ascertain what effects are occurring and the feasibility of mitigating these impacts by the application of technology and best management practices. Of particular concern is the impact of how dredge disposal alters current pattern and dispersion of sediment in the Estuary, the effects of suspended sediment on turbidity, and how dredge disposal affects the bioavailability of toxic substances and subsequent acute and chronic effects in the Estuary. The Regional Board recognizes the lack of information about these concerns and therefore endorses a study-based approach to monitor the effects of dredging and dredge disposal.
16. The Long Term Management Strategy (LTMS) study plan will include a description and implementation schedule for the following tasks: (1) shoaling rates and pre- and post-dredge bathymetric surveys at project sites to be utilized a dredging minimization study, (2) investigation of in-situ bioaccumulation effects on biota at and surrounding the disposal site, (3) a suspended sediment investigation to define the fate of suspended material resulting from disposal activities, and (4) a detailed report of dredging activities, monitoring data, and the assessment conducted to determine the physical, chemical, and biological impacts of the disposal activities. A summary of dredging activities including the dredging quantities, transportation to the disposal site and an assessment of disposal site capacity should also be submitted. The report should include recommendations for future monitoring and disposal activities.
17. The maximum monthly volume targets cubic yards (C.Y.) of dredge sediment allowed for disposal at each site are:

<u>Site</u>	<u>Target Volume(C.Y.)</u>
Alcatraz (SF-11)	
October - April	1.0 million

May - September	0.3 million
Carquinez Straits (SF-9) (any month)	1.0 million
San Pablo Bay (SF-10)	0.5 million

18. The maximum annual volume targets in cubic yards (C.Y.) for each calendar year at each disposal site are:

<u>Site</u>	<u>Target Volume(C.Y.)</u>
Alcatraz (SF-11)	4.0 million
Carquinez Straits (SF-9)	2.0 million (NY) 3.0 million (WY)
San Pablo Bay (SF-10)	0.5 million

The volume targets for the Carquinez Straits disposal site are 3.0 million cubic yards for wet and above normal years (WY) and 2.0 million cubic yards for all other year classification (NY). Water year classification are designated by the California Department of Water Resources (DWR).

19. The beneficial uses of San Francisco Bay in the vicinity of the dredging and disposal areas are:
- Fish migration and spawning
 - Estuarine habitat
 - Wildlife habitat
 - Preservation of rare and endangered species
 - Water contact and non-contact water recreation
 - Shellfish harvesting
 - Commercial and sport fishing
 - Navigation
 - Industrial process and service supply
20. The study of the impacts of bay disposal is a long-term project and will be incorporated into all future Waste Discharge Requirements of the discharger.
21. The discharger and interested persons have been notified of the Board's intent to issue requirements for the discharge and have been provided with the opportunity to submit their written comments.

22. The Board, in a properly noticed public hearing on March 21, 1990, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provisions of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Receiving Water Limitations

1. The dredging and disposal activities shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The discharge of waste shall not cause the following conditions to exist in waters of the State that cause a nuisance or adversely affect beneficial uses at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Aquatic growths;
 - c. Significant alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
3. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved Oxygen 5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

- b. Dissolved sulfide 0.1 mg/l maximum
- c. pH Variation from natural ambient pH by more than 0.5 pH units.
- d. Un-ionized ammonia 0.025 mg/l as N Annual Median
0.16 mg/l as N Maximum
- e. Turbidity The turbidity of the waters of the state at any point beyond 200 feet outside of the disposal area shall not increase above background levels by more than the following:

<u>Receiving Water Background</u>	<u>Incremental Increase</u>
< 50 units	5 units, maximum
50 - 100 units	10 units, maximum
> 100 units	10% of background, max

- 4. The discharger shall not cause a violation of any applicable water quality objectives for receiving waters adopted by the Board and the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

B. Provisions

- 1. The discharger will conduct physical, chemical, and biological characterization of the sediment to be disposed in San Francisco Bay. All analyses will be performed according to EPA/COE approved protocols or protocols approved by the Regional Board's Executive Officer. The results of these tests will then be used to conduct a feasibility study on the application of technology to reduce and mitigate adverse impacts on the Bay from dredging activity. The discharger, as part of the LTMS proposes to develop and conduct the studies contained in the attached In-Bay Demonstration Program.
- 2. The Regional Board's Executive Officer shall report periodically on the progress of the studies in the attached In-Bay Demonstration Program. If the Demonstration Program are not incorporated into the LTMS, the Regional Board will consider modifications to this Order.
- 3. The discharge of dredged materials to the waters of the State shall cease

immediately whenever violations of requirements are detected by the self-monitoring program or inspections by Regional Board staff as determined by the Executive Officer, and the discharge shall not resume until compliance can be assured to the Executive Officer's satisfaction.

5. The discharge of dredged materials to the waters of the State shall take place only at approved aquatic disposal sites.
6. The discharger shall comply with all sections of this Order immediately upon commencement of dredged material disposal.
7. The discharger shall coordinate with the Department of Fish and Game so that dredging activities minimizes potential biological impacts.
8. The discharger shall permit the Regional Board or its authorized representative in accordance with California Water Code Section 13267(c):
 - a. Entry upon premises in which any required records are kept.
 - b. Access to copy any records required to be kept under terms and conditions of this order.
 - c. Inspection of monitoring equipment or records.
 - d. Sampling of any discharge.
9. The discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.
10. This Order will expire upon completion of the dredging and disposal project and submittal of all required reports to the satisfaction of the Executive Officer.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 21, 1990.



Steven R. Ritchie
Executive Officer

File No. 1535.05

Attachments:

Standard Provisions & Reporting Requirement, Dec 1986

In-Bay Demonstration Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

IN-BAY DEMONSTRATION PROGRAM

FOR

U.S. ARMY CORPS OF ENGINEERS
FISCAL YEARS 1990, 1991, AND 1992
ANNUAL MAINTENANCE DREDGING

Order No. 90-044

I. IN-BAY DEMONSTRATION PROGRAM REQUIREMENTS

Reporting responsibilities of dischargers are specified in Sections 13325(a), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16. The principal purposes of a monitoring program by a discharger, also referred to as a self-monitoring program are to (1) document compliance with waste discharge requirements and prohibitions established by this Regional Board and (2) facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge.

For the discharger's annual maintenance dredging, fiscal years 1990-1992, an environmental monitoring and assessment plan is required for each year. The study plan for monitoring the impacts of dredge disposal must be submitted for approval by the Executive Officer. For all designated in-Bay disposal sites, the Study Plan must include the following:

- 1) Determination of shoaling rates at project sites and bathymetric surveys at each disposal site which accounts for the fate of dredged sediment within the estuary system;
- 2) Monitoring and assessment of the in-situ bioaccumulation of toxic materials in biota within and surrounding each disposal site;
- 3) An assessment of the physical and biological effects of bedded and suspended sediment on water quality including turbidity and beneficial uses of San Francisco Bay;
- 4) A report presenting the dredging activities, monitoring data, and the assessment conducted to determine the physical, chemical and biological impacts. The report should include recommendations for future monitoring and disposal activities.

The bioaccumulation assessment should, at a minimum, be for the constituents listed in Table One and using an approach consistent with the State Mussel Watch Program (Attachment A). The Study Plan should contain the rationale for sample location, a sampling protocol, and schedule for implementation that specifies dates and activities. Once approved by the Executive Officer, the Study Plan for a specific year will be part of the self-monitoring program and the waste discharge permit will then become effective for the maintenance dredging of that year.

II. REPORTS TO BE FILED WITH THE BOARD

1. Report by telephone to the Regional Board five days ahead of the scheduled date of commencement of dredging operation.
2. In the event the discharger is unable to comply with the conditions of the waste discharge requirements and prohibitions, the discharger shall notify the Regional Board Office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to prevent the problem from recurring.
3. A report on the study findings shall be submitted to the Executive Officer sixty days after conclusion of all annual maintenance dredging activities. This report should include study objectives, methods, monitoring and assessment findings, impact of disposal activities on beneficial uses, and recommendations for disposal practices and monitoring and assessment activities for the next fiscal year's maintenance dredging operations.
4. The written report shall contain a statement by the District Engineers, San Francisco District, COE or his designee, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-044.
2. Is effective on March 21, 1990.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.



Steven R. Ritchie
Executive Officer

Attachment